

Appl. No. : 10/624,816  
Filed : July 22, 2003

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### REMARKS

Claims 1-14, 17-19, 22-23, and 29-32 are currently pending in the application. Applicant thanks Examiner Stephanie Smith and Examiner George Evanisko for the courteous and helpful personal interview conducted with Applicants' representative Gregory A. Hermanson on June 29, 2006 (hereinafter referred to as "the Interview"). Claims 1, 4, 5, 7, 14 and 22 are amended herein. Applicant submits the foregoing amendments and the following remarks in response to the Office Action mailed on May 4, 2006, and in response to the interview discussions, and respectfully asserts that claims 1-14, 17-19, 22-23, and 29-32 are now in condition for allowance.

#### Rejection of claims 4-5 under 35 U.S.C. §112

In paragraph 3 the Office Action indicated claims 4-5 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, stating "[w]ith reference to claims 4 and 5, 'some of said series...' and 'a portion of said series...' are vague." Claims 4 and 5 are amended to include "at least one of said series," as suggested, to distinctly claim the subject matter as disclosed and supported in the originally filed specification at, for example, paragraphs 48, 50, and 54, and in Tables 3-5. Accordingly, Applicant respectfully requests this section 112 rejection be withdrawn.

#### Rejection of claims 1-3, 7-8, 14, 17, 18-19, and 29-30 under 35 U.S.C. §103(a)

In paragraph 4 the Office Action indicated claims 1-3, 7-8, 14, 17-19 29-30 are rejected under 35 U.S.C. §103(a) as being unpatentable over Lathrop (U.S. Pat. No. 6,083,250) in view of Beder (U.S. Pat. No. 6,041,262). In addition, during the Interview the Examiner suggested that Kleditsch et al. (U.S. Pat. No. 5,470,349) discloses an electrode design similar to the electrode configuration claimed in independent claims 1, 7, 13, 14 and 22. After carefully reviewing the cited art including Kleditsch, Applicant traverses this rejection along with the suggestion that Kleditsch discloses an electrode configuration similar to the claimed electrode configurations.

To articulate a *prima facie* case of obviousness under 35 U.S.C. § 103(a), the PTO must, *inter alia*, cite prior art that teaches or suggests all the claimed limitations. *In re Royka*, 490 F.3d 982 (C.C.P.A. 1974); MPEP §2143.03. Lathrop, Beder, and Kleditsch, alone or in combination,

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do not disclose all the claimed limitations of the above-referenced claims for an apparatus or method that applies "electrical stimulation to the skin" (claims 1, 7, 14) including, for example, the limitations "wherein said first and second electrodes are concentric closed contours configured such that said second electrode defines a boundary that surrounds the first electrode and the first electrode surrounds a non-electrode region" (claims 1, 7, and 14), "first and second electrodes located on a surface" (claims 1, 7, 14), and "said first electrode and said second electrode each comprise an elongated surface" (claim 14).

Lathrop does not teach the above-stated limitations. In paragraph 4 of the Office Action the Examiner admits "Lathrop does not teach that the first and second electrodes are configured such that the second electrode defines a boundary that surrounds the first electrode."

Beder also does not teach the above-stated limitations. Beder discloses a hair regrowth apparatus that includes a series of electrode rings disposed on a head-shaped electrically insulating liner that is positioned in a hood and can be placed over a subject's head. As discussed in the Interview, the electrodes disclosed in Beder do not apply "electrical stimulation to the skin" (as discussed below), the electrodes are not "located on a surface" and are not configured such that "first and second electrodes are concentric closed contours, and wherein said second electrode is configured to define a boundary that surrounds the first electrode and the first electrode surrounds a non-electrode region," as claimed. In addition, Appellant submits that it is improper to combine Lathrop with Beder, because Beder teaches away from their combination. *See In re Grasselli*, 218 U.S.P.Q. 769, 779 (Fed. Cir. 1983). Instead of teaching applying "electrical stimulation to the skin" Beder teaches to apply stimulation by positioning the electrodes such that the electrodes "do not touch the subject's scalp" (Beder, col. 3, 39-40). In fact, Beder specifically teaches to stimulate the scalp with "electric fields" from electrodes placed near the skin (col. 5, 40-41) rather than providing "electrical stimulation to the skin" as claimed, stating "[t]ypically, the "subject's scalp is separated from the inner surface of liner 10 [having the electrodes] by a gap of several centimeters" (Beder, col. 5, 35-37). Accordingly, Beder cannot be properly be combined with Lathrop, and even if it could, Beder and Lathrop together do not teach the claimed limitations.

Although not cited in the Office Action, Kleditsch was provided during the Interview and will therefore be addressed here as well. Kleditsch discloses a device for treatment of skin

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conditions, using several electrode configurations. For example, in one configuration the device has a pin-shaped central electrode 4 and a counter-electrode arranged as a wire ring 16 positioned above a surface of the device 4. The counter-electrode wire ring 16 can be shaped as a polygon, an ellipse, or a circle. In another configuration the Kleditsch device has a pin-shaped central electrode 4 surrounded by four or six similarly pin-shaped electrodes 5. Kleditsch, Col. 6, 29-37; Figures 4-7. However, in all the electrode configurations disclosed and taught in Kleditsch, the pin-shaped central electrode 4 (in Kleditsch) it is not one of a first or second concentric closed contour electrodes configured such that the "second electrode defines a boundary that surrounds the first electrode and the first electrode surrounds a non-electrode region" (claims 1, 7, and 14) or one of a "first and second electrodes located on a surface" (claims 1, 7 and 14), instead being one end of a small movable pin (e.g., Figure 4) having a small solid surface between the edges defining its diameter. The claimed electrodes are not an arbitrary design, but instead are designed to "allow for large electrode to skin surface contact" which cannot be realized with one of the electrodes being a small pin electrode, as taught by Kleditsch. Specification, paragraph 41.

Neither Lathrop, Beder, or Kleditsch, singly or in combination, teach or disclose all the limitations of the amended independent claims 1, 7, or 14. Accordingly, Applicant respectfully request that this claim rejection be withdrawn for claims 1, 7 and 14 and asserts that claims 1, 7 and 14 are in condition for allowance. Because claims 2-3, 8, 17-19 and 29-30 depend from claims 1, 7, or 14 either directly or indirectly, Applicant also respectfully request that this claim rejection be withdrawn for claims 2-3, 8, 17-19 and 29-30, and asserts that these claims are also in condition for allowance for at least the same reason.

Rejection of claims 4-6, 9-13, and 31 under 35 U.S.C. §103(a)

In paragraph 5 the Office Action indicated claims 4-6, 9-13, and 31 are rejected under 35 U.S.C. §103(a) as being unpatentable over Lathrop in view of Beder, and in further view of Dhurjaty (U.S. Pat. No. 6,597,949). Applicant traverses this rejection because the cited references do not show all the claimed limitations, and because there is not a suggestion or motivation to modify or combine the references.

Claims 4, 5, 9-12, 13 and 31 contain limitations relating to using AC and DC voltages (pulses) to treat viral infections. For example, claim 4 includes the limitation "...at least one of

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said series of pulses comprises AC waveforms, and wherein at least one of said series of pulses comprises DC waveforms." Claim 5 includes the limitation "...least one of said series of pulses alternates between AC and DC pulses." Claims 9-12 include the limitation "...applying alternating periods of AC and DC electrical stimulation pulses...." Claims 13 and 31 include the limitation "...a circuit configured to supply both AC and DC voltage to said electrodes...." In paragraph 5 the Office Action admits "Lathrop and Beder...do not teach alternating AC and DC pulses," thus apparently relying on Dhurjaty to teach the above-listed limitations. Dhurjaty discloses a defibrillator that produces a direct voltage which is applied to a patient's heart in a biphasic waveform to stop fibrillation, where the defibrillator is mechanically powered, e.g., by a mechanical crank. Dhurjaty, col. 1, 45-48, and col. 2, 14. Paragraph 5 of the Office Action states Dhurjaty teaches "[p]roducing both AC and DC pulses for therapy." As discussed in the Interview, Applicant respectfully asserts Dhurjaty does not provide "AC and DC pulses" for therapy or for the treatment of an infection. Using a stack of capacitors, Dhurjaty merely produces a direct current biphasic waveform that is delivered to a subject via paddles to stop fibrillation Dhurjaty, col. 4, 29-60.. There is no motivation to properly combine Dhurjaty with Lathrop and Beder, and even if they were, the combined art does not teach all the claimed limitations.

Accordingly, Applicant respectfully requests that this claim rejection be withdrawn for claims 4, 5, 9-12, 13 and 31 and asserts that claims 4, 5, 9-12, 13 and 31 are in condition for allowance. Claim 6 depends from claim 1, discussed above, and Applicant also respectfully requests that this claim rejection be withdrawn and asserts that claim 6 is also in condition for allowance for at least the same reason.

Rejection of claims 22-23 and 32 under 35 U.S.C. §103(a)

In paragraph 7 the Office Action indicated claims 22-23 and 32 are rejected under 35 U.S.C. §103(a) as being unpatentable over Lathrop in view of Beder as applied to claims 1, 7, and 14, and in further view of Carter et al. (U.S. Pat. No. 6,554,781). Applicant traverses this rejection because the cited references do not show all the claimed limitations, and because there is not a suggestion or motivation to modify or combine the references.

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Claim 22 is amended to include that "said signal source capable of producing a series of electrical pulses wherein at least one of said series of pulses comprises AC waveforms and wherein at least one of said series of pulses comprises DC waveforms" which is not disclosed in the cited art, as discussed above and as discussed in the Interview. Because claims 23 and 32 depend directly from claim 22, Applicant also requests that the claim rejections be withdrawn for claims 23 and 32 for at least the same reasons, and asserts claims 22, 23, and 32 are in condition for allowance.

#### Claim Amendments

Claims 1, 4, 5, 7, 14 and 22 are amended herein in response to the Office Action and in light of the discussions at the Interview of June 29, 2006. These amendments do not contain new matter, and support for the amendments is found throughout the specification.

In particular, Claim 4 was amended to include all the limitations of previously submitted claim 1 and to address the section 112 rejection in the Office Action. Claim 5 was also amended to address the section 112 rejection in the Office Action.

Claims 1, 7, 14, and 22 were amended to move the claimed subject matter forward towards allowance as discussed hereinabove and in the Interview.

#### Conclusion

The applicant has endeavored to address all of the Examiner's concerns as expressed in the outstanding Office Action. In view of the foregoing amendments and remarks, Applicant respectfully requests reconsideration and withdrawal of the outstanding rejections, and that the claims now be found in condition for allowance.

Any claim amendments which are not specifically discussed in the above remarks are not made for patentability purposes, and it is believed that the claims would satisfy the statutory requirements for patentability without the entry of such amendments. Rather, these amendments have only been made to increase claim readability, to improve grammar, and to reduce the time and effort required of those in the art to clearly understand the scope of the claim language.

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Should the Examiner have any remaining concerns that might prevent the prompt allowance of the application, the Examiner is respectfully invited to contact the undersigned at the telephone number below.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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Dated:

August 4, 2006

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